

**REMARKS**

In the Office Action, the Examiner objected to claims 13, 16, 18, 73, 94 and 111, and rejected claims 1, 3-12, 14, 15, 17, 19, 21-28, 30, 32-42, 44, 56, 82, 83, 85-93 and 95-110. By this paper, Applicants amend claims 30, 56, 73, 82, 95 and 111 and cancel claims 37, 63, and 101. No new material is introduced by way of these amendments. Upon entry of the amendments, claims 1, 3-19, 21-28, 30, 32-36, 38-42, 44, 56, 58-62, 64-73, 82, 83, 85-100 and 102-111 will be pending in the present patent application and are believed to be in condition for allowance. Reconsideration of the application as amended is respectfully requested.

**Allowable Subject Matter**

In the Office Action, the Examiner noted that “[c]laims 13, 16, 73, 94 and 111 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.” Office Action, page 5. Applicant thanks the Examiner for noting the presence of allowable matter. Although Applicant believes that the current claims are allowable over the references as currently drafted, Applicant has amended independent claims 30, 56, 82 and 95 to include some of the common subject matter of claims 73, 94 and 111 indicated as allowable by the Examiner. As discussed further below, Applicant believes that this places the independent claims in condition for allowance.

**Claim Rejections Under 35 U.S.C. § 102**

In the Office Action, the Examiner made the following rejections under 35 U.S.C. § 102:

- Rejection of claims 30, 32, 36, 38-40, 56, 62, 64, 65, 70, 71, 72, 82, 83, 95, 100, 102, 103 and 108-110 as being anticipated by ViviPrint 540 Homopolymer – Technical Data Sheet – date uncertain (hereafter referred to as “ViviPrint”);
- Rejection of claims 30, 36, 38-40, 56, 64-70, 72, 82, 83, 95, 102-108 and 110 as being anticipated by Nohr et al., U.S. Publication No. 2002/0149656 (hereafter referred to as “Nohr”); and

- Rejection of claims 30, 32, 36-40, 56, 58, 62-72, 82, 83, 95, 96 and 100-110 as being anticipated by Maitra et al., U.S. Patent No. 5,874,111 (hereafter referred to as “Maitra”).

Applicants respectfully traverse these rejections.

### ***Legal Precedent***

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention “*in as complete detail as contained in the ... claim*” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

### ***None of the Cited References Discloses the Claimed Concentration Range.***

Amended independent claims 30, 56 and 82 of the instant application recite “wherein the polyvinyl pyrrolidone nanoparticle source is present in the drilling fluid in an amount in the range of from about 0.0025% by volume to about 5% by volume of the drilling fluid.” (Emphasis added). Further, amended independent claim 95 recites “wherein the polyvinyl pyrrolidone nanoparticles are present in the drilling fluid in an amount in the range of from about 0.0025% by volume to about 5% by volume of the drilling fluid.” (Emphasis added).

In contrast to the ranges recited by the claims of the instant application, ViviPrint discloses a solution of 10% polyvinyl pyrrolidone nanoparticles in an aqueous solution. As this concentration is outside of the claimed range, ViviPrint does not anticipate independent claims 30, 56, 82 and 95 or their respective dependent claims.

Maitra also does not disclose a concentration range for nanoparticles in an aqueous solution that falls within the range recited by the current claims. Rather, Maitra discloses a procedure for the formation of nanoparticles using reverse micelles suspended in hexane. *See* Maitra, col. 3, ll. 15-33; Example 1. In the one point in the process disclosed by Maitra at which a raw reaction mixture that may contain nanoparticles is suspended in a phosphate buffer solution, no concentration range is disclosed. *See id.*, col. 5, ll. 45-50. As noted in the legal precedent section, for anticipation, a cited reference must show the *identical* invention “*in as complete detail as contained in the ... claim.*” *Richardson*, 868 F.2d at 1236, (emphasis added). Thus, Maitra does not anticipate independent claims 30, 56, 82 and 95 or their respective dependent claims.

The final reference cited by the Examiner under 35 U.S.C. 102, Nohr, discloses polyvinyl pyrrolidone coated silica nanoparticles. As a preliminary matter, Applicant respectfully notes that these coated silica nanoparticles are not the equivalent of nanoparticles made from crosslinked polyvinyl pyrrolidone as numerous properties may differ. For example, one skilled in the art would recognize that the polyvinyl pyrrolidone coated silica nanoparticles of Nohr may not swell in water to form hydrogel particles. However, even if these coated silica nanoparticles were to be considered equivalent to nanoparticles made from crosslinked polyvinyl pyrrolidone, the reference does not disclose a concentration range. *See* Nohr, paragraph [0141]. Thus, Nohr does not disclose a concentration for the nanoparticles that falls within the claimed ranges. Accordingly, Nohr does not anticipate independent claims 30, 56, 82 and 95 or their respective dependent claims.

For at least the reasons discussed above, Applicant respectfully asserts that the cited references do not anticipate amended independent claims 30, 56, 82 and 95 or their respective dependent claims. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejections under 35 U.S.C. § 102 and allow these claims.

**Claim Rejections Under Provisional Obviousness-Type Double Patenting**

In the Office Action, the Examiner made the following rejections:

- Rejection of claims 1, 3-12, 14, 15, 17, 19, 21-28, 30-42, 44, 56, 58-67, 69, 70, 72, 82, 83, 85-93, 95-105, 107, 108 and 110 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/183,122; and
- Rejection of claims 1, 3-12, 14, 15, 17, 19, 21-28, 30-42, 44, 56, 58-67, 69, 70, 72, 82, 83, 85-93, 95-105, 107, 108 and 110 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/183,113.

Applicant respectfully notes that the present application was filed before either of the two applications cited by the Examiner. The present application, U.S. Serial No. 10/776,887 was filed on February 11, 2004, while both U.S. Serial Nos. 11/183,122 and 11/183,113 were filed on July 15, 2005. As Applicant believes that upon entry of the amendments discussed above the claims will be in condition for allowance, this leaves the provisional obviousness-type double patenting ("provisional ODP") rejections as the only rejections remaining in this application.

As noted by the M.P.E.P.:

If "provisional" ODP rejections in two applications are the only rejections remaining in those applications, the examiner should withdraw the ODP rejection in the earlier filed application thereby permitting that application to issue without need of a terminal disclaimer. A terminal disclaimer must be required in the later-filed application before the ODP rejection can be withdrawn and the application permitted to issue. If both applications are filed on the same day, the examiner should determine which application claims the base invention and which application claims the improvement (added limitations). The ODP rejection in the base application can be withdrawn without a terminal disclaimer, while the ODP rejection in the improvement application cannot be withdrawn without a terminal disclaimer.

M.P.E.P. 804(I)(B)(1) (emphasis added). As examination of the later filed applications has apparently not started, no provisional ODP rejections could have been issued at this point for these applications. However, pursuant to the procedure quoted above, Applicant respectfully

asserts that the provisional ODP rejections should be withdrawn in the current, earlier-filed, application without the need for a terminal disclaimer.

Accordingly, Applicant respectfully requests that the Examiner withdraw the provisional ODP rejections and allow the claims without requiring a terminal disclaimer. If, after following the procedure above, the ODP rejections remain pending in the present application and are no longer provisional, Applicant will consider filing a terminal disclaimer at that time.

**Payment of Fees**

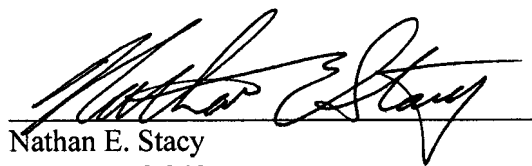
No fees are believed due at this time. If fees, including fees for extensions of time and other reasons, are deemed necessary to advance prosecution of the present application, at this or any other time, Applicants hereby authorize the Commissioner to charge such requisite fees to Deposit Account No. 06-1315; Order No. HLBT:0014.

**Conclusion**

For the reasons discussed above, Applicant respectfully requests withdrawal of the objections and allowance of all pending claims. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Respectfully submitted,

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